1: Lorimer T-3 (1920-4; 1934-5) 1938 AV7 Burusho AV7

companions who came down with us to Kashmir to observe peasants ploughing with *oxen* (whose wants could be less completely met) and without a dung dish! 243 262

When the corn is fully threshed, the winnowing begins in cooperation with a light breeze. Next the winnowed grain is passed through a coarse sieve (barakbèsh) whose mesh is composed of thin leather thongs which retain any particles of straw, and it is finally tossed in a finer sieve (gherbèl) which retains the grain and lets the dust through. The grain is then loaded into great skin-sacks and carried off to store. The due amount required for seed-grain is set aside first, and not the utmost extremity of hunger would induce a Hunza peasant to encroach thereon. Next, emergencies are budgeted for—births, weddings, dues such as rent (if any) and hospitality, which includes deaths in *other* homes, for relatives and friends would be disgraced if a bereaved family had themselves to bake during the first seven days of mourning. What then remains, represents the year's supply. 243 261 251

Ripe millet is treated by being beheaded, and the ears may then be threshed by cows or beaten with poles according to quantity. The buckwheats are beaten only, even small children merrily cooperating half in fun, half in earnest to show their prowess. 248

Grain for current use is carried to the mill in sacks or bags of skin. The mill-house is a picturesque cube of stone and mud situated beside a convenient irrigation channel. It may possess one wheel or two. The wheel is a vertical oblong of tree trunk, fitted with 10 or 12 wooden wings; the lower end of its axis is supported on a horizontal pole, the upper fitted into a central hole in the upper millstone. The water is led on to it by a steeply sloping hollowed log. The inside of the mill, lighted only from the door, is fitted with a cross rafter built into the walls on to which the hopper is ingeniously hung by a forked segment of tree. The hopper itself consists of a section of log, tapered and hollowed out. Attached by a string to the small tray below the aperture in the base of the hopper, is a loose clapper which is gently agitated by the rotation of the upper millstone on which it rests, this shakes the tray and encourages a steady flow of grain. The flour as ground is ejected into a hollow trough. Near by, a wooden pole, impaled on a horizontal wooden pin, projects up through the earthen floor. Each end of the pin rests on a 'Heath-Robinson' pile of stones and a simple adjustment of its height regulates the position of the lower millstone and thus the coarseness or fineness of the flour desired. The mill, the loom and the comparatively new-fangled lathe are the only [543] 402

252 yeast and cooked on a griddle, like small, thin pancakes. Zaidu made them as of course, since they are the normal local food, and we had a few fresh for every meal (they are horrid stale). Their great merit is that they can be eaten without butter or
262 jam. This was a great advantage, for butter was a problem.
234 The tinned butter we brought with us for the road all went bad—you could not blame it in that heat—and butter in our sense of the word is unknown in Hunza.

There was fortunately a little cow's milk to be had, but the cows get so little to eat that their milk has not much butter-content. A really good Hunza cow yields at most a quart of milk a day after she has fed her calf, and she only gives milk at all for a month or two after the calf is born. So
[415] milk is no part of the regular local diet. The people normally milk into a gourd, which makes an excellent jug, but has the
[372] drawback that there is no ready way of cleaning it. Where fuel is so scarce no one could boil water merely to scald milk-vessels, and the method is to hold the gourd over the smoke of the fire. This seems to be perfectly wholesome, but it gives a gruesome taste to the milk, already sufficiently tainted with memories of yesterday, last week, last year. So we would send one of our people with a clean aluminium bucket and get the cow milked straight into that. In this way we procured as much as we needed for tea and coffee and puddings, but of course not enough to make butter from, as we had been accustomed to do in Gilgit. Fresh butter proved to be an unattainable luxury. The local butter, which they call *maltash*, is much prized; there is so little of it that it is kept strictly for feast days and great occasions. Their chief chance of making it is from the goats' milk when the men have the animals up at the summer pastures. They make it day by day, a little at a time, and when they have collected about two pounds they shape it into a ball, wrap it in birch-bark, tie it up with strips torn from the roots of juniper, and then bring it home to
• [251] store. With luck one good she-goat will provide two balls of *maltash* per season. It is then stored in a tiny stone larder under the nearest water-channel to keep it damp and cool, and thence produced when wanted. Even when quite fresh it tastes very

FIRST WALKS ABROAD

000 names of things, so she took up the good work: "That's our roof; that thing sticking out is a cross rafter," and "That's our ladder." Presently we came to the corner of her square, stone house, the wall of which rose straight from the water-channel, and there we found her father and a couple of small boys. We crossed a tiny two-trunk bridge to talk to them at the door, and papa was evidently much pleased that we had taken notice
● 251 of the two small girls. Mother and an auntie were sitting a little farther back under some fine mulberry trees splitting apricots, which they were going to spread presently on a big boulder or on the roof to dry. Everywhere we looked boulders and roofs were decorated with glorious golden-pink pools of drying apricots.

252 I slipped over to the women while David continued to chat
354 to the master of the house. With luck the dried apricots would
302 last them all through the winter, for this had been a good year. The apricot stones they were keeping carefully as they worked. Presently the children would crack them between stones and the kernels would be hoarded. Eaten with dried apricots they make a delicious almond-and-raisin dessert for feast days or offerings to guests, while a good proportion of them must be pounded by the women till the oil is squeezed out that will give their sole indoor light. If by good luck there is any oil to spare, it makes a prized unguent for the hair and most families contrive to have enough to sleek their plaits or fringes for
246 great occasions. This cheery family bade us a friendly good-bye as we moved on, and a little farther along the channel, which was now making a curved sweep round, we saw a man standing in a reaped field below us. This crop had been lucerne, he said; he gets two crops of it off one field each season. David told him how they get seven or eight crops in Persia, but consider the first crop bad for the animals (for some reason which we never discovered). He was much interested, and said they did not notice any difference in the wholesomeness of their first and second crop: Hunza animals are not encouraged to be
000 faddy. Presently we came to a fine, walled-in mulberry orchard on our left and climbed up into a sloping field where a slight crop of grass was growing between boulders. We sat down to

1/2 [of Kaniza, a Burushe child--Analyst]

2: Lorimer T-3 (1927-9; 1934-5) 1939 AV7 Burusho AV7

342 after a day or two the stone-and-mud walls have dried to the same appearance of timeless indestructibility as those of fifty or one hundred years ago. We passed first, as always, through a small byre, not yet inhabited by its cow; then at right angles through a dark, narrow passage 5 or 6 feet long, and then through the low hall-door into the house itself. Your main object in building a house at all is to be as warm and free from draughts as possible during the "Great Cold," and no one in his senses would let his hall-door open straight on to the wind-swept mountain side. Hence the byre ante-room, which not only defeats the direct outside air, but contributes something of animal warmth to the human warmth within.

291 When we emerged into the living-room (the *atrium*, as it
291 were), beautifully bright with light from the smoke-hole, we
352 were standing in a shallow trough below the floor level where the newcomer kicks off his muddy boots in winter. Most people at all well-to-do wear soft home-made boots up to their knees in winter-time. But skins are precious and, however cold the weather, they take their boots *off* to save them when they come to an extra rough bit of ground. This entrance place has in it the "musicians' bench," under which are stored the family basin and similar utensils and on which is piled a store of firewood.

342 The floor of the room is a small square of hard-beaten earth
[352] which in this gloriously dry climate remains admirably clean; and roughly in the centre of it is a shallow hole, edged with four stone kerbs, which is the hearth. Behind the hearth is a low bench sacred to the lady of the house, the presiding genius
343 of indoors. Beside it she sits to do or superintend the cooking
● 251 and behind her is a low wooden door opening into the store-
[414] room; the home-made wooden key of which hangs always on her person. The store-room runs the whole width and height of the house. It has need to be a roomy place, for here stand the skin sacks of grain, the heaped baskets of potatoes, apples, dried mulberries and apricots, the kernels, the wool, the stone wine-jars, the jars of apricot oil, the basket of savoury herbs—all the family's supplies for a twelvemonth, which it is her duty to guard and to apportion.

2: Lorimer T-3 (1920-4; 1934-5) 1939 AV7 Burusho AV7

Chapter 23

WINTER AND THE "GREAT COLD"

132 No climate could be more delightful than the autumn and early winter of Hunza, from October till far on in December, and the Burusho make the most of these bracing, genial days, hurrying to get through every sort of outdoor job before the six or eight weeks of the "Great Cold."

245 Not by any means every household can spare water, manure, or space for a vineyard, but those who can value not only the fresh grapes which ripen later than all other fruits, but also the home-made wine which helps to brighten the cheerless [251] winter days. Unfortunately, by the time the grapes are ripe, the sun has already lost its heat and raisin-drying is impossible. At least this was the only plausible explanation we could get for the fact that the Hunzukuts who dry their mulberries and apricots do not make raisins.

The vines are trained over low pergolas only 3 or 4 feet high, less frequently allowed to climb up living trees. Since the Hunzukuts greatly value shady sitting places we wondered why they did not go in for loftier pergolas like those the Persians love. The explanation is cruelly simple—they cannot spare the extra length of poles.

There were not many vineyards in Aliábád, but we located two favourably situated ones and paid several visits to each. One was many hundred feet down, at Gulkhan, below the old fort. Though the vine leaves were still green, every bunch of 273 fruit had been already cut when we came down to see the wine-making. Under the roof of an open-faced shed were three "mangers," as it were, set side by side, the two end ones stacked high with ripe grapes. There must have been 3 or 4 cwt. at least in each. The centre one was only partially full.

4a Lorimer L-3 (1920–4; 1934–8) 1935 AV7 Burushō AV7

No. XXXIX.

Harvesting.

In Hunza first they thresh the harvested barley. Having done so they collect (the grain) and make some thin bread and a cake of thick bread. Then they take big bags to the threshing floor and fill them (with the grain).

As they fill them they say thus: "I crave a blessing from the Diqōni Pīr. In the name of God! O God! Fill my belly, O God! Fill me full, O God! Grant the blessing of Iskkāshum, O God!" Saying (these words) they fill the bag.

Two men do the filling. One man holds (up) the mouth of the bag and the other fills it. They make all the others hide themselves. Then the two men, when they have filled (the bags), call to the (concealed men) and bring them up, and the latter, coming up say: "You have brought prosperity!" And the filler replies: "(It is due to your) luck and fortune!"

Then they have some food and bring the bags to the house and empty them into the grain-bin. Subsequently they bring in the wheat harvest too, and then the buckwheat. And, setting aside wheat and barley for seed-grain and for funeral rites, they take

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11 *bowse* — not recorded elsewhere; it is perhaps for *bergo* a possible plural form of *bo. wūji gowr* — exactly corresponds to Shina *gor fāhu* inverted. It is glossed Hindustani *ergi pīche* which confirms the natural identification with the words *-ǰi and gor but does not elucidate the sense in which they are used. Compare the term *-ǰi.ali* (Vocab. *-ǰe) also meaning 'funeral rites' which also seem to contain the idea of 'after', 'following'.

The grain is distributed as alms, *zaiwṛ*, after a death.

67b n'o·usin, dištaki d'i·us sa·atse yal.iŋki n'etan, da sarmutaiŋar nikin d'o·rasar yal.iŋale tauča·n.

Yal.iŋgu·imar sarmuta kr hičuti pši giyas dastu·r bila. Han pšti.an ke e·r ča·n.

5 Ho do·r dusu·n ta.yurer nikri·n utiŋata 'utsiča·n. N'e·tain ta.yurate ta.yay ne fat ča·n.

Datumu šeče·r (*or*, šiče·r) u.y'u·rki 'i·tai dorč'a·n. Ho T'umeščiliŋar heri.e ta.yurtse u.i·litse ča·n. Gur'u·mo gu·re ta.yurtse u.i·litse ča·n.

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1 *yal.iŋki n'eta·n* — glossed "sifting", but literally: "making it millable, i. e. fit for grinding".

4 *e·r ča·n* — in such cases it is not easy to decide whether *ča·n* is to be taken literally 'they make', 'prepare' or in some specialised sense such as 'they allot', 'assign', 'present'.

6 *ta.yay ne* — the mush is made in some way to render the lids air-tight, whether by sealing the junction of the lid and body or plastering over the whole article must depend on the exact nature of the *ta.yer* of which I am not informed.

the year's food supply out (of the bin) and they sift it in the sun. Then they put it into bags and take it away to the mill to be ground.

It is the custom to ladle out a *ẖichuṣi* (2 or 3 lbs. of grain) per bag for the miller, and they also make for him one piece of bread.

Then when they have ground it they bring it back and pour it into the bin and stamp it down with their feet, after which they seal the bin with mud and leave it.

They grind separately their daily rations for consumption during autumn, and then at the Tümishèling they begin on the barley bin and in spring they begin on the wheat bin.

In Gilgit grain is kept in a *kədəl* consisting of a wattle frame which is plastered over with mud. In Persia large clay vessels ⁊ɯɯ are used for similar purposes. The mouth is closed with a lid and the junction is sealed with mud.

? *ẖeċər* — if the idea in the mind is "flour"; *ẖiċər*, if it is bread.

ɯɣɔrɪkí — v. Vocab. s. v. *-ɣɔrɪkí.

1. *pfɪrʌn, pfɪrʌn*, pl. *pfɪrʌiyo* x spider. — *pfɪrʌnɨ pfʌsk* spider's web.
2. *pfɨrʌn* small ball (of yarn). — *ɨuɨ ʌkhuɨrumʌn pfɨrʌnʌn* a small ball of warp yarn this size.

pirɛ̈ʌno -muts x drumstick (for big drum).

pfiriɨnɛ̈ skewer, small scrap (of wood). — *ɣʌšiɨlɨ pfiriɨnɛ̈ kɨ api* there isn't a stick of firewood, there isn't even a scrap of wood. 126.3. *ɣʌšiɨlɨ pfiriɨnɛ̈ girkis delʌɜr kuli kɨ api* there isn't even a stick to beat a mouse (rat) with (stock expression).

pf irkʌnʌs, pl. *pfirkʌnʌšo* x boil (medical), EOL pimple.

pirkʌnʌs pirkaɨ- to rock, to totter (as of a stone which one is trying to lever out of its position). (Cp. *dᵉ-ʌpirkʌnʌs*).

pfiɨko -muts x basin (used in houses of big people, formerly of wood, now of brass or iron).

pirpi zedoary, H. *jʌdwaɨr* (*dʌwaɨi ka naɨm*). — *pirpi mʌnaɨs* to be scarce, rare, hard to obtain, H. *kʌmyaɨb hoɨna, naɨdɪr hoɨna*.

piɨš stʌs to present to, set before. — *jʌʃ gusɨ Nuɨr Bʌxšmulɨ* (*kʌreʈi*) *piɨš stumo* the old woman presented the basket to N. B. 382.16. Prs.

piɨẓhʌlɛl tainted, a little high. — *čhʌp piɨẓhʌlɛl mʌnila* the meat has become tainted.

Hunza people until March or April eat meat killed in December. The people of Hindi keep meat (breast and ribs) slightly cooked, all the year round, for the use of the Mir.

piɨškʌš -iŋ y screwdriver. QUB. (Cp. *peɨnčkʌš*).

pʃiʈ v.s.v. *pʃiʈoi*.

piʈaiyu = *biʈaiyo*, pl. of *biʈʌn*. 378.14.

7:Tobe C,T-3 (1959)1960 AV7 Burusho AV7
Hunza

workers are good workers. They are not to be compared with the ordinary workers found throughout Pakistan and India. They do a day's work somewhat comparable to that done in the West. They are neither slouchers nor slackers. 461

All along the route there were groups of men working here and there. At this time of the year there were not too many employed or working on the roads and this is understandable. Every man in Hunza and Nagir must provide for the winter. Remember, there is, broadly speaking, no money and the only means he has of providing is by the work done with his own two hands. 464 491

The dried apricots and other fruits that he may put away, the wheat or the barley or the buckwheat that he stores in his house, the few roots that he puts into his root cellar are his means of sustenance until next spring. So you can readily understand that there is no great surplus of Hunzans or Nagiriwals during the months of July and August to do work on the roads and I know that the Hunza Road is not maintained by the State of Pakistan. Therefore there would be little or no money forthcoming and those who did work would probably be donating their time. Or perhaps their work would be somewhat similar to a type of taxation, although I dislike using that word when referring to or talking about the people of Hunza! [251]

We were more than a sauntering hour reaching Altit. If you've got any ideas about easy walking in this land, you'd better forget them. 487

As is usual on the entire Hunza trail, with few exceptions, it was climbing or descending all the time. The few places where you were neither climbing nor going down, you were walking along the river bed. In midsummer when the glaciers are melting quickly you

245 311 fore, knolls or rolling lands are preferred and gravelly, sandy or light loam soils are chosen.

There are neither rolling lands nor tilthy knolls in Hunza. Here they have to take what they can get and make the best of it. The precipitous bits of arable land are terraced to prevent erosion and the flat pieces, such as there are, create no drainage problem because there is no danger of too much rain.

You will seldom see more than a few dozen fruit trees in one group or area. They are scattered here, there and everywhere and are planted only where and when they can grow to best advantage.

I would also like to mention that fruit and walnut trees are found growing almost everywhere along the roads or trails in the populated area, so no bit of arable land, no matter where it is found, is wasted.

245 I do not know if there is any dispute as to who owns the crops but all the way from Gilgit to Altit I did not find a bit of ripe fruit on the trees—which means most clearly that somebody harvests the crops at just the right time or when the fruit is at or about proper maturity.

433 251 From some of the larders that I examined, I gathered that they certainly wouldn't have any overabundance and I further felt that, by the time winter and early spring passed and before the new crops were ready to harvest, some bellies might have thinned out and some more might even be hungry.

There was no reason for me to disbelieve the Mir when he said Hunza was the "land of just enough" but I still felt that, by the look of things, there would be many occasions when that "just enough" might have to be stretched a little. I was convinced that they certainly did not have too much of any food commodity.

142 The only two stout men that I met on my entire

311 were a few valleys where a bit of pasture might have been established or used, they just couldn't afford to waste acres for pasture purposes.

234 I did not see any cheese—that is, cheese as we know
•251 it—in Hunza, but I maintain that their stored butter is
262 cheese. I knew from what I had read and learned that they have a most unusual method of storing their butter, and one day the Mir sent one of his servants out to bring some in. In a few minutes the servant returned, carrying on a tray a huge bundle that looked like and was slightly larger than a football. He placed it in front of me and told me to go ahead and unwrap it, which I did. It was neatly and firmly wrapped in birchbark and when I removed layer after layer of wet, dripping bark, I at last came to the so-called butter. It was gleaming pure white. A knife was handed to me and I dug a little piece out of the side and tasted it. It was absolutely delicious. It had a fresh wholesome flavor. I thought it was cheese and that is what I really believe it is.

234 Their method of making this butter is as follows: Goat, sheep, cow or yak milk is used. Their method of churning butter is strictly Eastern. They do not use wooden or metal churns as they are found and known in the West. Usually goat skins are used. They are turned inside out so that the smooth, tanned side is outside. Then the ends of the hide are carefully sewn together. Openings are allowed to remain by means of the legs, and these are used for filling the skin with the milk to be churned and later to extract the butter. While the churning is taking place, the leg openings are firmly tied.

Then the milk-filled hide is joggled, weedled, spanked, turned and twisted over the knees and this is maintained continually until some sort of solidification takes place. Just as with us, impatience and inquisitive-

ness become master and the shaking is stopped, while a peek is taken by untying a leg opening to see if the process is beginning. 234

When at last butter is formed, it is squeezed out of the skin churn and then they make firm round balls out of it. It is wrapped in birchbark, placed underneath a water channel and left there for months, or years as the case may be. One record through which I poured related that this butter was sometimes kept for 100 years. I found no verification of this from the citizens of Hunza. Perhaps in this instance the butter was forgotten and was discovered many years later, but it is kept for years and is usually brought out for special celebrations and other occasions. 234 251 [262]

Now you will hear the word "ghee" referred to on every hand when talking about food. This is the selfsame butter but heated to the melting point and allowed to harden. By then it turns into a bright yellow color. It is used as a spread but also for cooking, baking, frying and such. Most Hunzans prefer "ghee" over the plain ordinary butter. The Mir told me that he and his household all preferred it to butter. 234 262

So therefore, besides the fruit, nuts, grain and vegetable crops, they have curd, ghee, butter (cheese) and milk. Those who do eat meat would be lucky if they could afford to have it more than two or three times a year, but I understand meat is available for most festive occasions. 262

While in all probabilities they dry other types of fruit, I did not see any other dried fruits but apricots. On my travels throughout the country I saw thousands of trees and probably millions of apricots but I did not see one go to waste. Everywhere I went apricots were drying. They had been split open, the stone removed and stored and the fruit left for the sun and air to cure and dry 251

251 them. Even apricots that were bruised, damaged or even starting to rot were put out to dry. No treatment of any kind was used . . . just simply nature at work.

245 [428] [423] An apricot tree is a most valuable asset in Hunza. It is a fact that an apricot tree is often willed to a daughter by parents and she can retain her rights to the tree and of course the crops that come from it for her lifetime.

In the Western world, the apricot is not considered a long-lived tree. In America, especially, it is considered not much longer lived than a peach or a plum and that means at the most, 25 or 30 years of life. When you take into consideration the truth that in Hunza apricot trees live to be well over 100 years, one wonders just where the difference comes in.

245 242 I really believe that I have the answer. In Hunza apricots are grown from seed. No matter where I looked or sought I could find no tree nursery in either Nagir or Hunza. (I did find a small government nursery in Gilgit.) Therefore I would assume that every Hunzan farmer grows his own trees from the planting of the apricot seeds. No doubt some Hunzan farmers are more adept at this task than others and they probably grow a few extra ones and maybe trade them for other things with their neighbors.

But, as explained, the trees here last many, many years and the orchard space or land to grow them on is very limited. Therefore, there would be little or no demand for nursery stock. I inquired wherever I went concerning grafting and I tried to establish whether or not they knew anything about the process and how much they knew, but I came up against a blank wall. I could gather no definite information. That they know how to graft and are acquainted with the process, I am sure but to what extent it is used, I could not establish.

256 splash against the water wheel or paddle. The force is [376] sufficient to make the millstone revolve at a tremendous pace. The water can be quickly shut off by just putting the missing stone back in place, diverting the water flow down the conduit.

The millstones are enclosed by a tray or bin about 5 or 6 inches high. As the ground wheat or flour is forced out between the stones, it slowly fills the bin. Then it is scooped up into goatskin bags, usually by a woman who is looking after the mill. In this manner it [262] is carried to the individual homes to be used in making the wholesome whole wheat Hunzan bread and chapatties.

There appeared to be no large scale or assembly line grinding. Each individual came in with a container of wheat to be ground.

[262] Barley and rye are also used for flour and occasionally, millet and buckwheat.

262 The earliest crop that can be ground into flour in [243] Hunza is barley. After the long winter, food supplies [527] are worn to the near starvation level and when the first barley is ready for harvest, people of Hunza have cause to celebrate and do so in their barley festival.

252 I soon learned why chapatties were used in prefer- 262 ence to bread, not only in Hunza but all over Pakistan and India. A chapatty requires only flour and water, a bit of mixing and then rolling out and laying on a piece of metal that is laid over a fire. In a few minutes it can be turned and then it is ready for eating. Even though bread might taste better, it certainly would require a lot more preparation. Simplicity is the keynote!

251 From what I saw, very little flour is stored and probably the people of Hunza have long ago learned their lesson, that wheat ground into flour does not have long keeping qualities.

7:Tobe C,T-3 (1959)1960 AV7 Burusho AV7
Hunza

CHAPTER 37

Hunza Fat Factory

I SOMETIMES BELIEVE—in fact, it is a conviction of mine—that in America we waste or cast aside the most vital parts of many foods and we use as food the part that is of lower nutritive content.

In Hunza the kernels of the apricots are gathered and stored. Some of them are cracked and eaten out of hand. But the major portion is put away for future use and then turned into apricot oil.

Never, ever did I see one single apricot kernel wasted in Hunza. If you tasted the kernel of the apricot, you'd soon know why. It is every bit as delicious and fine flavored as the finest almond. In fact, the almond, peach and apricot are very closely related. I contend that the flavor of the apricot seed is every bit as good as that of the almond. The almond, however, gains its popularity and superiority because of its thinner shell, which means easier cracking.

251 It is clear that the Hunzans have long, long ago learned a secret that we in the Western world have only discovered recently . . . that the nut or kernel of a fruit or seed deteriorates rapidly and can be the cause of ill health if allowed to remain for any length of time outside its natural shell or covering and then consumed . . . for the Hunzans never crack the hard coat of the apricot stones until they want to use the kernels. From 000 my experience with seeds of varying kinds and types during the past 30 years—whether grain, vegetable, fruit, nut or other—I have learned that no living seed whatsoever should have its skin or shell broken or removed until it is actually going to be eaten, planted or put to some other use.

Within the walls of the seed or nut coat are contained some of nature's greatest miracle workers. Underneath that ingenious covering are found the required enzymes, the spark of life, that breaks dormancy and tells the seed when to start to grow . . . or that can hold that large, tiny or microscopic embryo in suspended animation for a few hours or a thousand years, until conditions amenable to the needs of that species are located. If and when the environmental factors are met, the seed coat immediately fulfills its function and growth begins.

Therefore, it is never advisable to remove the shell or the protective coat from any seed or grain—especially of those that are going to be eaten.

It has been recently disclosed by science that seeds whose outer coatings have been removed can be harmful if eaten by a human. In some instances, it is suspected that they can be of carcinogenic character. Is it not remarkable that these people, who have had little or no contact with what we know as civilization and learning, have for almost 2000 years known enough not to do things that we have learned about only recently?

252 wild in various parts of the area. The oil rendered from [222] these kernels is probably used only for lighting, because [373] it is poisonous. Due to their heavy content of prussic acid, a handful of them is considered deadly. In Ni- [762] agara, if somebody wants to commit suicide, he jumps over Niagara Falls; in Hunza, they eat a batch of wild apricot kernels.

The kneading process is continued and the vessel is kept tilted so the oil runs down and forms a small pool. As the oil begins to form, the kneading becomes even more vigorous until every drop of oil possible is extracted. While the rendering of the oil may be hard on the knuckles, nothing could be simpler and the resulting product is probably the most healthful and finest fat product that human hands can produce.

[231] The pulp that remains after the oil[1] is extracted is [302] fed to milk-giving goats, sheep or cows, and is often used as a concoction or shampoo in which the Hunzans wash their heads. The oil of course is used in cooking, baking, frying, for lighting—and even for the hair.

[461] The good woman who performed the oil extracting task for me did not seem to be the least bit overburdened or taxed from this sort of arduous work. It probably would have been a hard day's work for a Western woman.

I would like to stress at this point that the heating process was not a cooking process in any sense of the word. Just a slight warming was all that was needed.

• 251 The apricot oil is never rendered and stored in casks 252 or otherwise, like many other people do with their oils. They may make sufficient to last them a few days but not more. This is poured into an earthen vessel or a bottle, if available. When a further supply is required, the pits are cracked and they go through the entire process as outlined.

1 [i.e. - oil from apricot seeds - ANALYST]

I don't think I was struck by any unpleasant or bad odors. No doubt you would assume that being a farmer, the excrement of animals wouldn't offend me and in saying that you'd be very, very right, but even with a city man's view, I don't think you would have found the Hunzan barnyards smelly or dirty. 356

The roof of the living quarters is just high enough so that a tall man can stand up in it without bumping his head. The Hunzan roofs usually have heavy timbers strung across—at least 3 inches thick and placed about 12 inches apart. They have to be that thick and heavy because on top of this is laid earth. Practically every home has an earthen roof. The floor, too, is of hard earth that has been pounded through years of use, until it is a good sound firm floor that can be readily swept and kept clean. 342

Apart from the Mir's palace, every other home that I visited in Hunza and in Nagir had earthen floors. Now naturally one wouldn't expect an earthen floor to be spic and span or shine and glisten the way a good hardwood floor can be made to shine and glisten. These earthen or clay floors can be made smooth and even be polished, and it is actually done.

Often the room is divided off to allow for a storage room, where the dried apricot stones and other fruits and vegetables are kept for winter use. [251]

In the center of the room a hole is dug and often stones are laid at the bottom. Here the fire is laid and this is how they keep warm during the winter and where they do their cooking. Above is a hole about 18 inches square to allow the smoke to escape. The people sleep on the floor within warming distance of the fire. Beds in the average Hunzan homes are unknown, but they have bed rolls or other cloth contraptions to make the floor softer. Some of the wealthier or well-to-do [354] 513 352 352

000 from it the organic method of land use.

262 From what I have seen, I have deduced the fact that the people of Hunza use less fat of any kind than most people found throughout the world. Some nations may lack animal fats, but make it up by fats found in [133] fish. The people of Hunza have very little animal fat and no fish, for there are few lakes in the area and the only fish that are found in the streams are those that were placed there, in an attempt to stock the Hunza and Gilgit Rivers and some of the nullahs.

They do get some fat from the butter that is made from the milk of the goats, sheep and a few cows and yaks. They also get a bit of fat from their walnuts and the kernels of the apricot seeds, neither of which can be considered to be high in fat content.

Lest you think that this lack of fat would have some effect on the people, let me stress that there are no more energetic people found in the world and they are continually active.

• 251 As soon as fall sets in and the harvest is completed, they carefully select and store and prepare their winter's larder. Then they divide and apportion all of their foods so they will last them throughout the winter.

262 An important addition to their winter diet is a gruel or a soup that they make from the various grains and this is eaten with their chapatties.

515 164 Dentifrices or toothpastes or powders of any kind are not used in Hunza. Yet the people have unusually fine teeth. False teeth, plates or dentures are unknown. So even at the expense of antagonizing the toothbrush and toothpaste people, it would appear that these implements and concoctions do not create good healthy teeth.

* * * * *

000 I have debated within myself whether or not I should

7:Tobe C,T-3 (1959)1960 AV7 Burusho AV7
Hunza

tilizers are used on their lands.

(8) All children in Hunza are breast fed. There is no specific prenatal care, and the good health of the mother is passed on to the infant . . . and the breast feeding gets the child off to a good start.

(9) All fruits and vegetables that are dried for storing have been exposed to the sun and air. No foreign substances are added or treatments used.

(10) Native herbs are used extensively . . . both as seasoning and as food.

(11) Glacial waters are the only waters used both for drinking and irrigation purposes. These glacial waters definitely contain many valuable minerals and nutrients, as revealed by laboratory tests.

(12) Apricot kernel oil is the most important source of fat. It is used in cooking as well as for salads. No solvents or extreme heat is used to extract the apricot oil.

(13) Natural whole grains are used broadly. There is no fragmentization in Hunza. While they do bake a bread, their chief form of bread is an unleavened type which they call chapatties. They are composed of whole ground grain made into a dough and rolled very thin. Then they are heated or baked slightly.

(14) Hunzans are light eaters. Their diet is comparatively meager.

There is no doubt that, if any human being were to follow the health rules of the people of Hunza, he could regain or maintain health. There is no magic formula connected with this set of rules. They are simple and to the point. In fact, they are so simple that most people will doubt their value. To these people I would say, "All of the great things in life—the important things and things of value—are invariably simple!"

In Hunza the following established Western health

[P44-A]

587 Marriages are not arranged against
586 the will of either party, and although
divorce is legally very easy for men
693 or women, it is not common. Women
are neither abused nor overworked,
and the mother is the respected chief
of the house, as the father is of the
[5A] farm. Marriage does not encompass
[562] companionship as we know it: men
spend their spare time in the company
of other men, and women visit exclu-
562 sively with other women. They hold
535 their dances on separate threshing
floors a half-mile or so apart, on the
same night, and woe betide the eager
teen-age boy who dresses in his sister's
clothes and sneaks into a girls' dance.

262 At the time of the Tumushaling,
[296] and only then, Hunza families
[231] butcher a sheep or two; cold weather
[256] preserves the meat for the few days
before it is all eaten—and it is virtually
all eaten. Even the long bones are
cracked to extract the last marrow.
After this taste of meat the winter of
the dietary year sets in. Gradually the
supply of carrots and potatoes fails,
then the wheat, the barley, the dried
[[148]] apricots, and the tea. By springtime
the poorer folk may eat only once in
two days. No one starves to death, but
no one has enough to stop hunger.

146 The regular Hunza diet has no fats,
no animal proteins, no vitamin A, no
vitamin D, a deficiency of vitamin B,
and a serious deficiency of calcium.
Apricots contain some sugar and vita-
min C, but the poorer families are un-
245 able to raise large crops. (The size
556 of apricot orchards determines a
man's wealth and status.) Hunzas use
372 every bit of the apricot, as they do of
829 the sheep. They cut the pits from the
fruits, crack them, and remove the al-
[412] mond-like nuts. The women hand-
grind these with stone mortars, then
squeeze the meal between a hand-stone
[359] and a flat rock to express the oil. Apri-
cot oil is fuel for the saucer-shaped
lamps that illuminate their homes, as
lamps of this type have done since the
824 Bronze Age. The oil is very bitter, na-
270 turally enough, because of its high
content of prussic acid, fifty drops of
which are said to be lethal in about
[27] four hours. Men add a few drops, as
bitters, to their wine, and occasion-
[262] ally a despondent woman takes a dose
in order to commit suicide.

164 Mild cases of rickets and scurvy
146 are rampant every spring—not enough
to kill, just enough to loosen teeth,
cause aching knees, and deform ribs